MySQL Installation Guide (Linux)

Step 1 - Installing MySQL

To install it, simply update the package index on your server and install the default package with apt-get.

$ sudo apt-get update

$ sudo apt-get install mysql-server

The password will be set in the next step.

Next, we'll finish configuring MySQL.

Step 2: Configuring MySQL

Run the security script.

$ sudo mysql_secure_installation

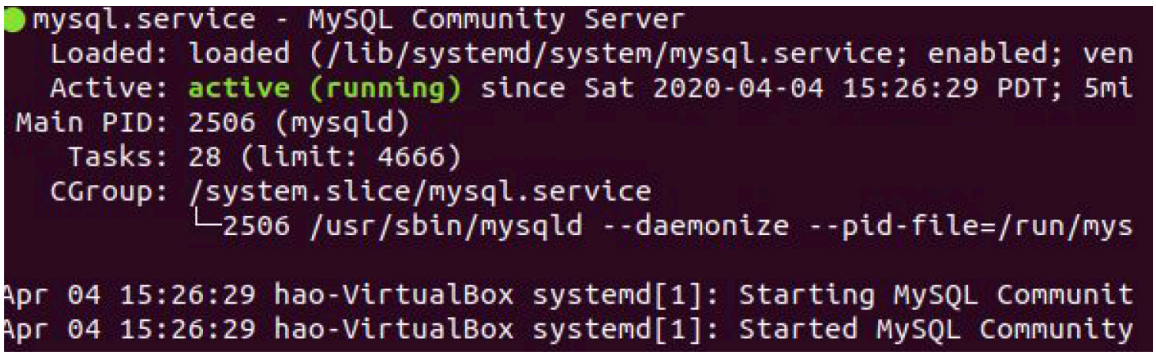
You can press Y and then ENTER to accept the defaults for all the subsequent questions, with the exception of the one that asks if you'd like to change the root password.

Step 3: Testing MySQL

To test MySQL, check its status.

$ systemctl status mysql.service

You'll see output similar to the following:



Step 4 - Instal MySQL Workbench

Update repositories and upgrade if necessary by typing the following line into the terminal:

$ sudo apt update && sudo apt upgrade

Install MySQL Workbench using the APT package manager:

$ sudo apt install mysql-workbench

Step 5 - Launch MySQL
1. Launch MySQL Workbench from the terminal:
$ mysql-workbench

Double click “Local instance 3306” to connect to the instance. Provide the root password when prompted for it. If you don’t see a connection, you can create it by clicking the “+” button and referencing the following window. You need to provide the connection name and the password by clicking “Store in Vault”. You can click “Test connection” to see whether it works fine or not.
If you cannot connect the MySQL, try to look at this:
https://stackoverflow.com/questions/50169576/mysql-8-0-11-error-connect-to-caching-sha2-password-the-specified-module-could-n
You need to open your terminal and run the following commands(by default the username is root):
$ sudo mysql -u root -p

You need to input the root password above.

If you want to change the root password later, use the following command.

mysql> ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY ' yourpassword ';

After this you can try again to connect to MySQL with the new password.

Create a Database and Tables, and Insert tuples

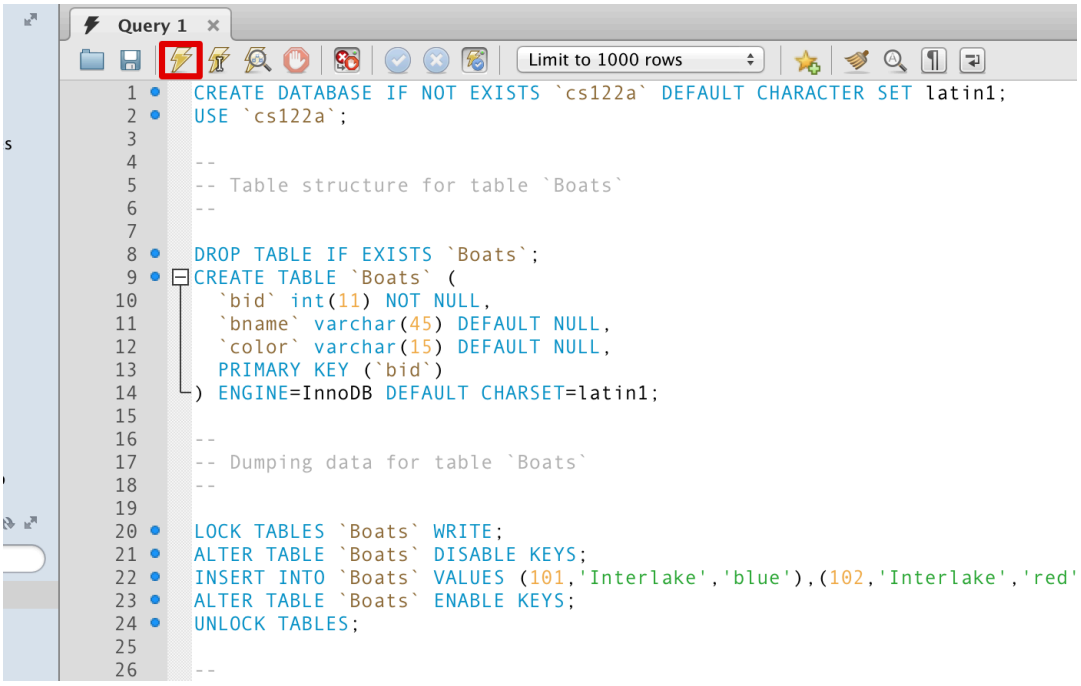
In MySQL Workbench, type the following commands to test if the database is running. Go to step 1 below that will allow you to run the following script in MySQL Workbench.

```
-- The Begin of the script
CREATE DATABASE IF NOT EXISTS `cs122a` DEFAULT CHARACTER SET latin1;
USE `cs122a`;


-- Table structure for table `Boats`
DROP TABLE IF EXISTS `Boats`;
CREATE TABLE `Boats` (
  `bid` int(11) NOT NULL,
  `bname` varchar(45) DEFAULT NULL,
  `color` varchar(15) DEFAULT NULL,
  PRIMARY KEY (`bid`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

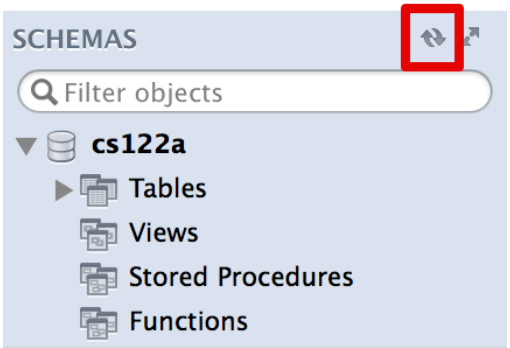
```
-- Dumping data for table `Boats`
ALTER TABLE `Boats` DISABLE KEYS;
INSERT INTO `Boats` VALUES
(101,'Interlake','blue'),(102,'Interlake','red'),(103,'Clipper','green'),(104,'Marine','red');
ALTER TABLE `Boats` ENABLE KEYS;


-- Table structure for table `Boats2`
DROP TABLE IF EXISTS `Boats2`;
CREATE TABLE `Boats2` (
  `bid` int(11) NOT NULL,
  `bname` varchar(45) DEFAULT NULL,
  `color` varchar(15) DEFAULT NULL,
  PRIMARY KEY (`bid`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;


-- Dumping data for table `Boats2`
ALTER TABLE `Boats2` DISABLE KEYS;
INSERT INTO `Boats2` VALUES
(103,'Clipper','green'),(104,'Marine','red'),(105,'InterClipper','blue'),(106,'InterMarine','red');
ALTER TABLE `Boats2` ENABLE KEYS;


-- Table structure for table `Reserves`
DROP TABLE IF EXISTS `Reserves`;
CREATE TABLE `Reserves` (
  `sid` int(11) DEFAULT NULL,
  `bid` int(11) DEFAULT NULL,
  `date` date DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;


-- Dumping data for table `Reserves`
ALTER TABLE `Reserves` DISABLE KEYS;
INSERT INTO `Reserves` VALUES
(22,101,'1998-10-10'),(22,102,'1998-10-10'),(22,103,'1998-10-08'),(22,104,'1998-10-07'),(31,102
,'1998-11-10'),(31,103,'1998-11-06'),(31,104,'1998-11-12'),(64,101,'1998-09-05'),(64,102,'1998-
09-08'),(74,103,'1998-09-08'),(NULL,103,'1998-09-09'),(1,NULL,'2001-01-11'),(1,NULL,'2002-02-0
2');
ALTER TABLE `Reserves` ENABLE KEYS;


-- Table structure for table `Reserves`
DROP TABLE IF EXISTS `Reserves2`;
CREATE TABLE `Reserves2` (
  `sid` int(11) DEFAULT NULL,
  `bid` int(11) DEFAULT NULL,
  `date` date DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;


-- Dumping data for table `Reserves2`
```

```
ALTER TABLE `Reserves2` DISABLE KEYS;
INSERT INTO `Reserves2` VALUES
(22,103,'1998-10-10'),(22,104,'1998-10-10'),(22,105,'1998-10-08'),(22,106,'1998-10-07'),(31,103
,'1998-11-10'),(31,104,'1998-11-06'),(31,105,'1998-11-12'),(64,104,'1998-09-05'),(64,105,'1998-
09-08'),(74,105,'1998-09-08'),(NULL,104,'1998-09-09'),(108,NULL,'2001-01-11'),(108,NULL,'2002
-02-02');
ALTER TABLE `Reserves2` ENABLE KEYS;


-- Table structure for table `Sailors`
DROP TABLE IF EXISTS `Sailors`;
CREATE TABLE `Sailors` (
  `sid` int(11) NOT NULL,
  `sname` varchar(45) NOT NULL,
  `rating` int(11) DEFAULT NULL,
  `age` decimal(5,1) DEFAULT NULL,
  PRIMARY KEY (`sid`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;


-- Dumping data for table `Sailors`
ALTER TABLE `Sailors` DISABLE KEYS;
INSERT INTO `Sailors` VALUES
(22,'Dustin',7,45.0),(29,'Brutus',1,33.0),(31,'Lubber',8,55.5),(32,'Andy',8,25.5),(58,'Rusty',10,35.0
),(64,'Horatio',7,35.0),(71,'Zorba',10,16.0),(74,'Horatio',9,35.0),(85,'Art',4,25.5),(95,'Bob',3,63.5),(
101,'Joan',3,NULL),(107,'Johannes',NULL,35.0);
ALTER TABLE `Sailors` ENABLE KEYS;


-- Table structure for table `Sailors2`
DROP TABLE IF EXISTS `Sailors2`;
CREATE TABLE `Sailors2` (
  `sid` int(11) NOT NULL,
  `sname` varchar(45) NOT NULL,
  `rating` int(11) DEFAULT NULL,
  `age` decimal(5,1) DEFAULT NULL,
  PRIMARY KEY (`sid`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;


-- Dumping data for table `Sailors2`
ALTER TABLE `Sailors2` DISABLE KEYS;
INSERT INTO `Sailors2` VALUES
(22,'Dustin',7,45.0),(31,'Lubber',8,55.5),(64,'Horatio',7,35.0),(71,'Zorba',10,16.0),(74,'Horatio',9,3
5.0),(85,'Art',4,25.5),(95,'Bob',3,63.5),(101,'Joan',3,NULL),(107,'Johannes',NULL,35.0),(108,'Sand
y',NULL,36.0),(109,'James',5,38.0);
ALTER TABLE `Sailors2` ENABLE KEYS;
-- The end of the script
```

Step 1. In Query 1, copy and the paste the above script. If you can't see "Query 1" tab, create one by clicking File -> New Query Tab. Execute the script by clicking "the thunder shaped icon".

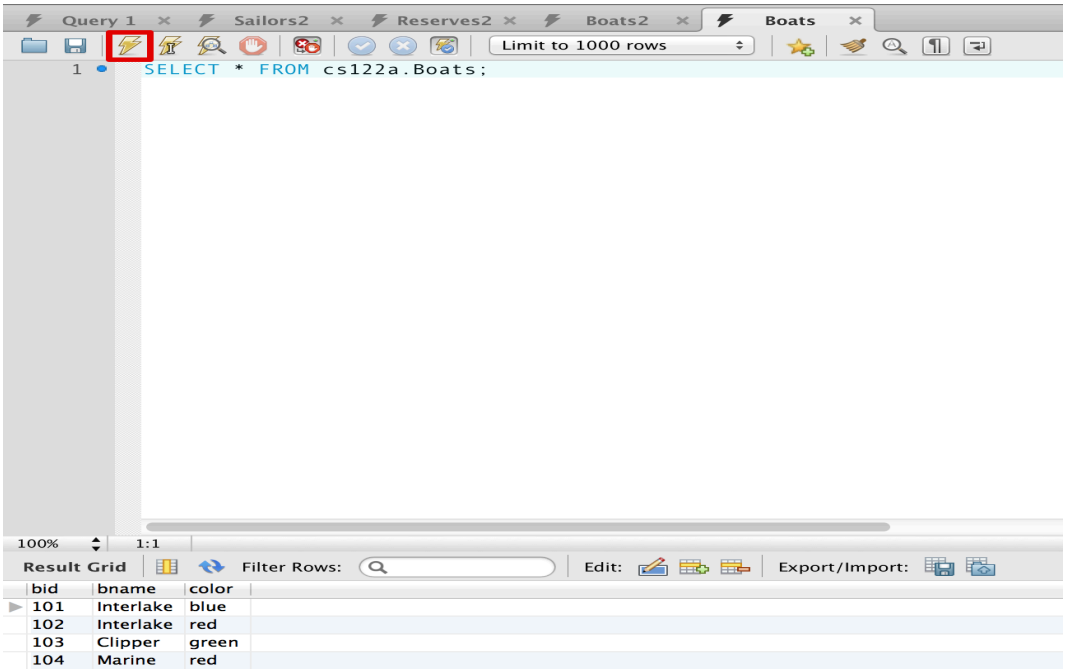


2. In the left pane, click "Refresh" button and you will see the "cs122a" schema and its Tables.



Step4- SQL queries

1. In order to form queries, type in the query in the 'Query' tab and click on the thunder shaped icon. You can execute the following query by choosing "File" -> "New Query Tab", type "SELECT * FROM cs122a.Boats;", and then click on the thunder shaped icon. You will see your results in the box below.



2. You can export the result into a CSV file by clicking "Export" button.